



ENVIRONMENTAL
RESTORATION
GENERAL EMPLOYEE
TRAINING

ENVIRONMENTAL RESTORATION

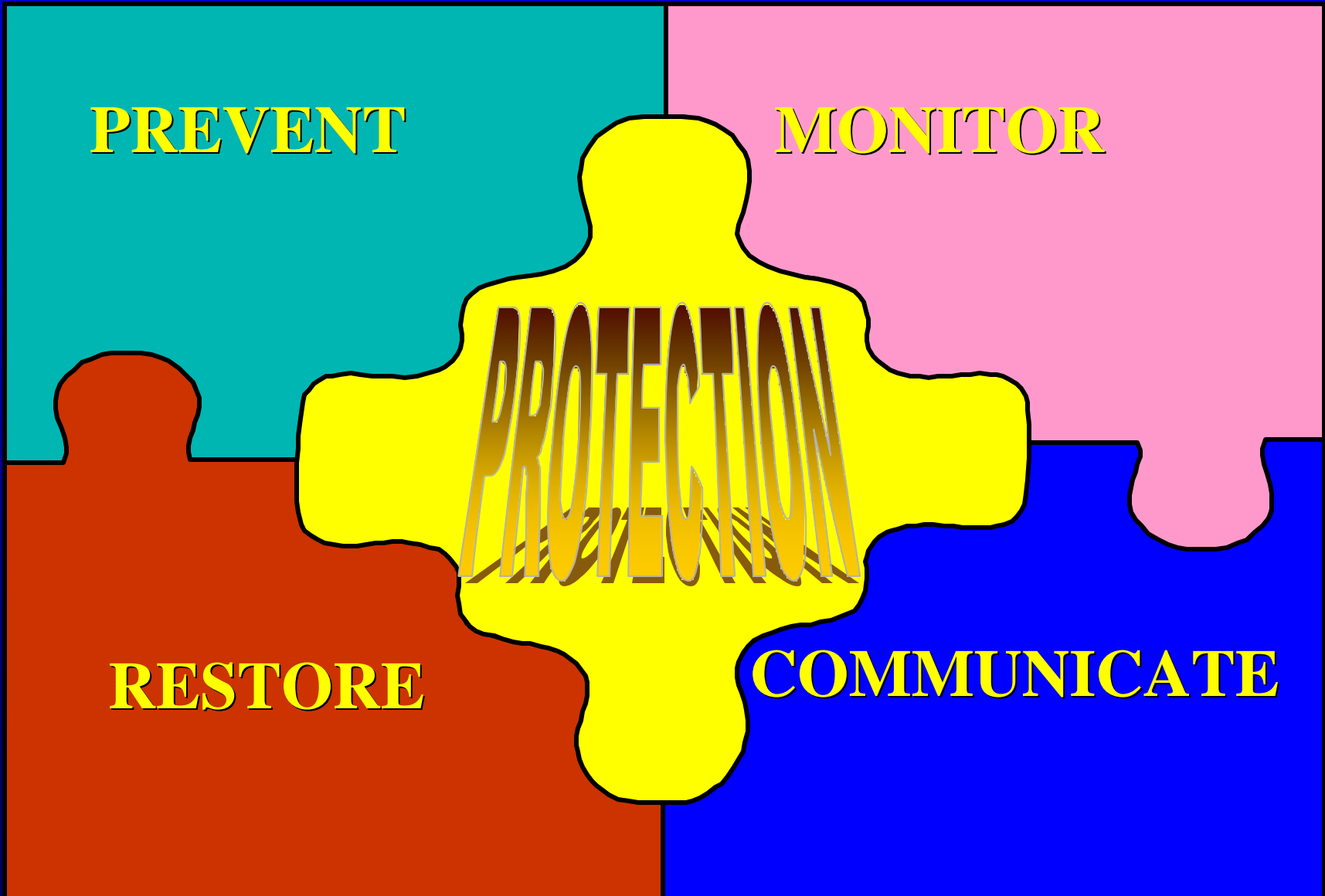
PREVENT

MONITOR

PROTECTION

RESTORE

COMMUNICATE





ER ADMINISTRATION



- DIVISION MANAGER

LES HILL: BLDG. 51; Ext. 8631

- RESPONSIBLE FOR OVERALL SAFE & EFFECTIVE WORK



OVERALL OBJECTIVES

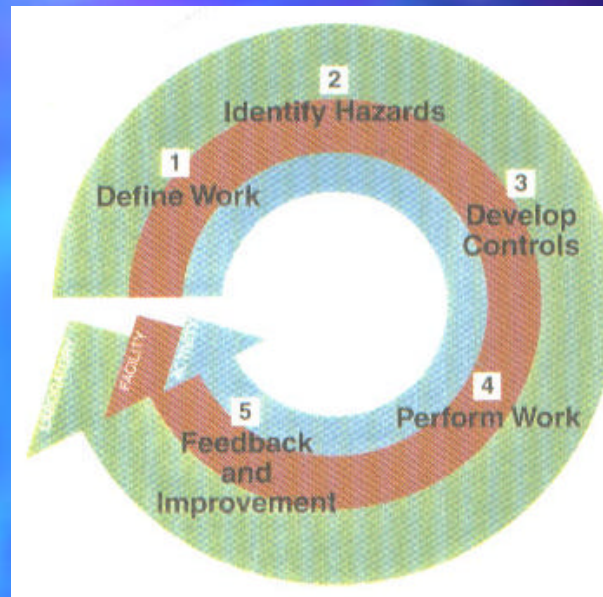
DELIVER "BEST IN CLASS"
ENVIRONMENTAL RESTORATION
SOLUTIONS WHICH ARE DESIGNED TO:

- PROTECT THE ENVIRONMENT
- PERFORM IN AN OPEN EXCHANGE
WITH THE COMMUNITY, REGULATORS,
& OTHER STAKEHOLDERS



OVERALL OBJECTIVES

- ACCOMPLISH RESTORATION WORK SAFELY, EFFICIENTLY, & COST EFFECTIVELY
- CONDUCT WORK IN A MANNER THAT MEETS ALL PERFORMANCE OBJECTIVES
- COMPLY WITH APPLICABLE FEDERAL, STATE, & LOCAL REGULATIONS
- COMPLY WITH BNL POLICIES & REQUIREMENTS



ISM

INTEGRATED SAFETY

MANAGEMENT





ISM

SAFE PERFORMANCE OF WORK & INCORPORATION OF APPROPRIATE SAFETY PROGRAMS

FIVE CORE FUNCTIONS

1. DEFINE SCOPE OF WORK
 - ESTABLISHES EXPECTATIONS & ACCOUNTABILITY
2. ANALYZE THE HAZARDS
 - IDENTIFY, CATEGORIZE & ANALYZE HAZARDS (e.g., NUCLEAR, CHEMICAL, THERMAL, ELECTRICAL, KINETIC)





ISM



3. DEVELOP & IMPLEMENT HAZARD CONTROL

- IDENTIFY APPLICABLE STANDARDS/REQUIREMENTS, ESTABLISH BOUNDARIES FOR SAFE OPERATIONS
- IDENTIFY CONTROLS TO PREVENT/MITIGATE HAZARDS, IMPLEMENT/MAINTAIN APPROPRIATE ENGINEERING/ ADMINISTRATIVE CONTROLS & TRAINING PROGRAMS

4. PERFORM WORK WITHIN CONTROLS

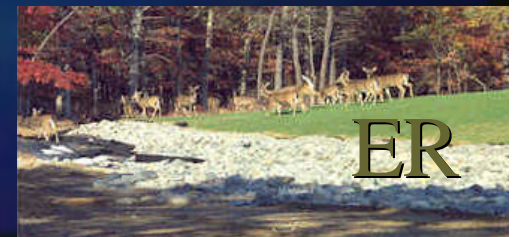
- WORK MUST BE CONDUCTED WITH CONTROLS, PROCEDURES, & COMMITMENTS CONTAINED IN AUTHORIZING DOCUMENT (WORK PERMIT) PRIOR TO WORK EXECUTION

5. PROVIDE FEEDBACK & CONTINUOUS IMPROVEMENT

- ALL WORK ACTIVITIES CAN BE PLANNED, PERFORMED, ASSESSED, & IMPROVED



ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)





ISO 14001 EMS

LAND, WATER, AIR, & WILDLIFE ARE OURS TO ENJOY TODAY & SUSTAIN FOR TOMORROW SHARING THESE RESOURCES WITH OUR NEIGHBORS & FUTUTRE GENERATIONS

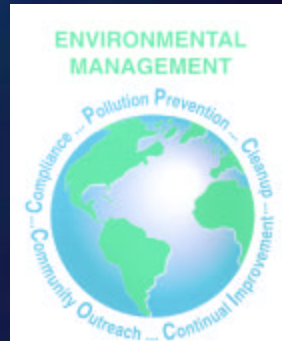
- WE SHARE THIS RESPONSIBILITY. IT CANNOT BE DONE BY ONLY A FEW
 - IT HAS TO BE PART OF EVERYTHING WE DO
 - PREVENTING AN ENVIRONMENTAL IMPACT IS THE RESPONSIBILITY OF EVERY WORKER & MANAGER
 - JUST LIKE SAFETY, IT NEEDS TO BE A WAY OF LIFE





ISO 14001 EMS

- ISO 14001 IS THE MANAGEMENT SYSTEM THAT:
 - DEFINES AND PRIORITIZES WORK
 - PROVIDES THE FRAMEWORK TO MONITOR, MEASURE & COMMUNICATE WHAT WE DO & HOW WE ARE DOING
 - ENABLES US TO CONTINUALLY IMPROVE OUR APPROACHES & SYSTEMS





ISO 14001 EMS NEED TO KNOW

- HAZARDS YOU WORK WITH
- HOW YOUR JOB IMPACTS ENVIRONMENT
- JOB-SPECIFIC CONTROLS TO PREVENT/MINIMIZE IMPACT ON ENVIRONMENT
- ACTIONS TO TAKE IN AN EMERGENCY





ISO 14001 EMS OBJECTIVES

- PROPER MANAGEMENT OF WASTE TO ENSURE REGULATORY COMPLIANCE & COST EFFICIENCY
- USE PROCESSES WHICH:
 - ESTIMATE PLANNED WASTE GENERATION
 - CONSIDER WASTE GENERATION
 - CONSIDER WASTE REDUCTION OPTIONS
 - FORMULATE COST EFFECTIVE TREATMENT/DISPOSITION APPROACHES
 - CONFIRM AVAILABLE FUNDING PRIOR TO INITIATION OF WASTE PRODUCING ACTIVITY





ER SPECIFIC ISO 14001 EMS OBJECTIVES

- ESTIMATE PLANNED WASTE GENERATION
- CONSIDER WASTE GENERATION/REDUCTION OPTIONS
- FORMULATE COST-EFFECTIVE TREATMENT/DISPOSITION APPROACHES
- ENSURE STORAGE MEETS RCRA & IAG REQUIREMENTS
- CONFIRM AVAILABLE FUNDING PRIOR TO INITIATION OF WASTE PRODUCING ACTIVITIES



ER SPECIFIC ISO 14001 EMS OBJECTIVES

- ACHIEVE RECORD OF DECISION (ROD)
SPECIFIC CLEANUP OBJECTIVES
- CONDUCT STAKEHOLDER
COMMUNICATIONS ACTIVITIES PER
COMMUNITY RELATIONS PLAN
- ZERO ENVIRONMENTALLY RELATED
REPORTABLE INCIDENTS



ER SPECIFIC ISO 14001 EMS OBJECTIVES

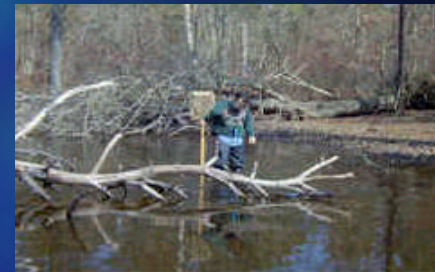
- EVALUATE POLLUTION PREVENTION OPPORTUNITY
- DOCUMENT CONTROL
- ASSESS PLANNED & UNPLANNED WASTE VOLUMES IN ALL EM PROJECTS
- MEET PERFORMANCE MEASURES PER CRITICAL OUTCOME DOCUMENT



ER

GENERAL EMS PRACTICES

- PROCEDURE COMPLIANCE
- THOUGHTFUL USE OF RESOURCES
- RECYCLING





EMS

PROPER WASTE DISPOSAL

- REGULATED INDUSTRIAL WASTE

- LUBRICATING OIL, OILY RAGS

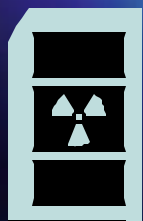
- HAZARDOUS WASTE

- IGNITABLE, CORROSIVE, REACTIVE, TOXIC OR APPEARS ON SPECIAL EPA LIST

E.G. LEAD, ASBESTOS

- RADIOACTIVE WASTE

- MIXED WASTE



REFER TO WASTE MANAGEMENT WEB SITE:

"HOW DO I MANAGE THIS WASTE STREAM"

http://www.bnl.gov/esd/pollutionpreve/How_do_I.htm



CONTROLS

- MONITORING
- WORK PLANS/PERMITS
- TRACKING NONCOMPLIANCE REPORTS





YOUR ROLES & RESPONSIBILITIES

- REVIEW DATA & PROCEDURES BEFORE/AFTER ACTIVITIES
- ENSURE OPERATIONAL CONTROLS IN PLACE
- CONTAIN/CHARACTERIZE/MANAGE WASTES
- TAKE APPROPRIATE ACTIONS IF CONTROLS FAIL
- CONDUCT ROUTINE INSPECTIONS
- MAINTAIN EQUIPMENT
- CONTINUAL IMPROVEMENT

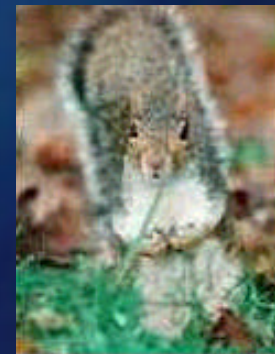




CONSEQUENCES IF OPERATIONS IMPACT ENVIRONMENT



- REGULATORY NON-COMPLIANCE
 - FINES, VIOLATIONS
- DECREASED STAKEHOLDER SUPPORT
- STOP WORK ISSUANCES & SCHEDULE IMPACTS
- PERSONAL ACCOUNTABILITY





ENVIRONMENTAL BENEFITS OF IMPROVED ENVIRONMENTAL PERFORMANCE

- AVOIDANCE OF RELEASES & ASSOCIATED COSTS
- REDUCED DISPOSAL COSTS
- ACCELERATED COMPLETION OF REMEDIAL ACTION
- WASTE REDUCTION
- IMPROVED RELATIONS WITH STAKEHOLDERS





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BNL ENVIRONMENTAL STEWARDSHIP POLICY

- INTEGRATE ENVIRONMENTAL STEWARDSHIP INTO ALL FACETS OF THE LABORATORY'S MISSIONS
- MANAGE PROGRAMS IN A MANNER THAT PROTECTS THE ECOSYSTEM, & EMPLOYEE/PUBLIC HEALTH



Pollution Prevention ... Cleanup ... Continual Improvement ... Outreach ... Compliance ... Community

P2C4



P2C4

- POLLUTION PREVENTION
- WASTE MINIMIZATION
- RESOURCE CONSERVATION
- CLEANUP
- COMPLIANCE
- COMMUNITY OUTREACH
- CONTINUAL IMPROVEMENT



*EVERY EMPLOYEE, VISITOR, CONTRACTOR IS
RESPONSIBLE FOR ADHERING TO THE POLICY*



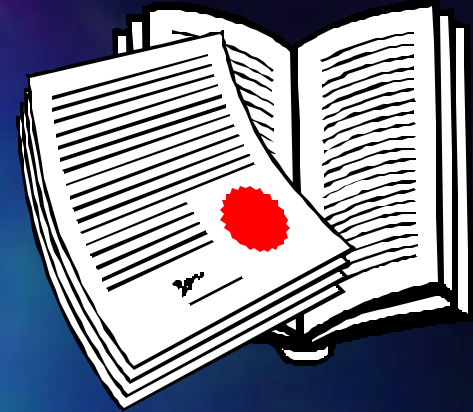
DOCUMENTS AND STANDARDS





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HEIRARACHY OF DOCUMENTATION



- DOE RULES & REGULATIONS
- BNL INTERAGENCY AGREEMENTS (IAG'S)
- STANDARD BASE MANAGEMENT SYSTEM
SBMS ([HTTP://SBMS.BNL.GOV](http://sbms.bnl.gov))
- ER OPERATIONS PROCEDURES MANUAL
(OPM)



Brookhaven National Laboratory's
Standards-Based Management System

[HTTP://SBMS.BNL.GOV](http://sbms.bnl.gov)

■ SUBJECT AREAS

- PROCEDURES FOR CONDUCTING WORK

■ FACILITY USE AGREEMENTS

- REQUIREMENTS, ROLES, & RESPONSIBILITIES OF BNL FACILITIES

■ MANAGEMENT SYSTEM DESCRIPTIONS

- BNL WIDE OPERATING PROCESSES IDENTIFYING EXTERNAL & INTERNAL REQUIREMENTS FOR CONDUCTING WORK





ER OPM

CHAPTERS:

1. AUTHORIZATION, EM DOCUMENTS
2. GUIDELINES FOR CONDUCT OF OPERATIONS
3. EMERGENCY PROCEDURES
4. TASK SPECIFIC PROCEDURES
5. GENERIC ES&H PROCEDURES
6. ADMINISTRATIVE & PROJECT CONTROLS PROCEDURES



CERCLA
COMPREHENSIVE ENVIRONMENTAL
RESPONSE, COMPENSATION &
LIABILITY ACT



CERCLA

- REMEDIATION PROCESS COVERING SUPERFUND SITES
- REQUIRES ANALYZING IMPACTS OF CLEANUP OR REMOVAL ACTIVITIES
- PROVIDES REGULATORY OVERSIGHT



CERCLA

CRITERIA:

- OVERALL PROTECTION OF HUMAN HEALTH
- OVERALL PROTECTION OF THE ENVIRONMENT
- COMPLIANCE WITH APPLICABLE OR RELEVANT & APPROPRIATE REQUIREMENTS (ARARs)



CERCLA

- ENABLES FEDERAL AGENCIES TO RESPOND DIRECTLY TO RELEASES OF HAZARDOUS SUBSTANCES THAT MAY ENDANGER PUBLIC HEALTH OR ENVIRONMENT
- PROVIDES FOR LIABILITY OF PERSONS RESPONSIBLE FOR RELEASES OF HAZARDOUS WASTE SITES



SARA SUPERFUND AMENDMENTS & RESTORATION ACT



SARA

AMENDMENTS TO CERCLA BASED ON EPA'S EXPERIENCE IN ADMINISTERING CERCLA

- STRESSES IMPORTANCE OF PERMANENT REMEDIES & INNOVATIVE TREATMENT TECHNOLOGIES IN CLEANING UP HAZARDOUS WASTE SITES
- REQUIRES SUPERFUND ACTIONS TO CONSIDER STANDARDS AND REQUIREMENTS FOUND IN OTHER STATE & FEDERAL ENVIRONMENTAL LAWS & REGULATIONS



SARA

- PROVIDES NEW ENFORCEMENT AUTHORITIES & SUPPLEMENTAL TOOLS
- INCREASES STATE INVOLVEMENT IN EVERY PHASE OF THE SUPERFUND PROGRAM
- INCREASES FOCUS ON HUMAN HEALTH PROBLEMS POSED BY HAZARDOUS WASTE SITES
- ENCOURAGES GREATER CITIZEN PARTICIPATION IN MAKING DECISIONS ON SITE(S) CLEAN UP



SARA

- INCREASES SIZE OF SUPERFUND TRUST FUND
- REQUIRES EPA TO REVISE HAZARD RANKING SYSTEM TO ACCURATELY REFLECT RELATIVE RISK TO HUMAN HEALTH & ENVIRONMENT POSED BY UNCONTROLLED HAZARDOUS WASTE SITES



CONDITION REPORTING SYSTEM

NONCONFORMANCE,
CORRECTIVE/PREVENTIVE
ACTIONS



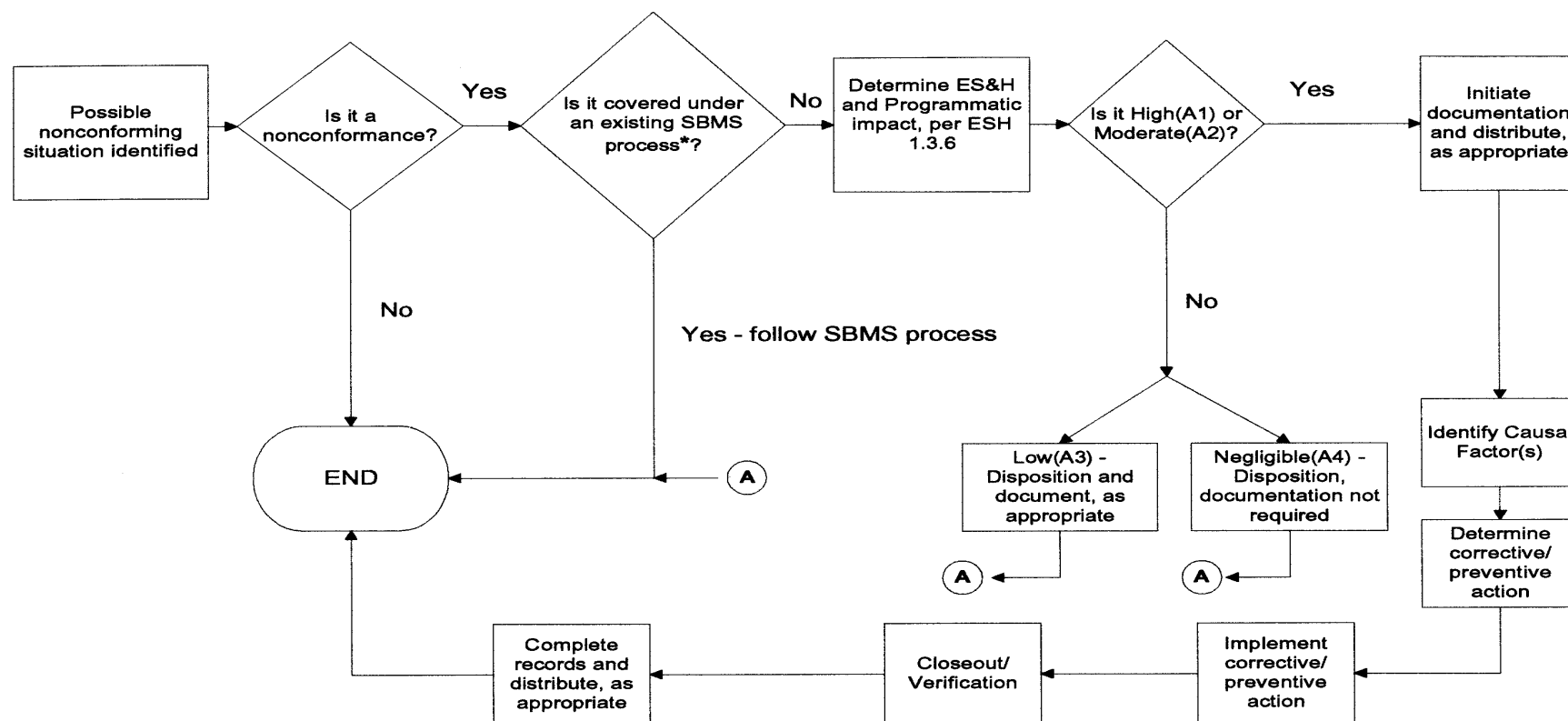
CONDITION REPORTING SYSTEM

- IDENTIFY A POTENTIAL NONCONFORMANCE
 - NOTIFY SUPERVISOR
- ANALYZE THE NONCONFORMANCE & DETERMINE CORRECTIVE/PREVENTIVE ACTION
 - DETERMINE CAUSAL FACTORS
 - IDENTIFY IMMEDIATE CORRECTIVE ACTIONS
 - DETERMINE ACTIONS TO PREVENT REOCCURRENCE



CONDITION REPORTING SYSTEM

Flowchart: Nonconformance and Corrective and Preventive Action



* Refer to Section 1, Step 4



REPORTING INJURIES

ALARMS

SECURITY

STOP WORK



REPORTING INJURIES

■ BNL EMERGENCY NUMBERS

- 911 OR 2222
- (1-631-344-2222 from cell phone)

■ NON-EMERGENCY

- WORKING HOURS: REPORT TO OMC
- NON WORKING HOURS: REPORT TO FIRE RESCUE GROUP (X2350)

REPORT ALL INJURIES/EMERGENCIES TO SUPERVISOR
ASAP. (IF RADIOACTIVE CONTAMINATION INVOLVED ALSO NOTIFY
RADIOLOGICAL CONTROL GROUP)





ALARMS



- FIRE ALARM: INTERMITTANT OR CONTINUOUS
 - *GO TO EMERGENCY ASSEMBLY AREA **
 - SITE-WIDE CONTINUOUS ALARM
 - *GO TO EMERGENCY ASSEMBLY AREA **
 - SITE-WIDE INTERMITTANT ALARM
 - *LEAVE BNL (FOLLOWING SECURITY DIRECTIONS)*
- *EMERGENCY ASSEMBLY AREAS

KNOW FOR EACH BUILDING YOU WORK IN



SECURITY

■ SECURITY PROGRAM

- PREVENT AGAINST THEFT/DAMAGE TO PROPERTY/EQUIPMENT
- PREVENT LOSS/COMPROMISE OF CLASSIFIED INFORMATION

■ INDIVIDUAL RESPONSIBILITY

- COMMIT TO MAINTAINING SECURITY
- WEAR ID BADGE CONSPICUOUSLY
- OBTAIN PERMISSION BEFORE REMOVING NON-CLASSIFIED/NON-SENSITIVE MATERIALS



ER

STOP WORK POLICY

ALL BNL EMPLOYEES, VISITORS
AND GUESTS ARE AUTHORIZED
AND ARE RESPONSIBLE TO
IMMEDIATELY STOP A BNL WORK
PROCESS THAT CREATES AN
IMMINENT DANGER TO
THEMSELVES, OTHERS OR THE
ENVIRONMENT





RADIOLOGICAL STOP WORK POLICY

ALL BNL EMPLOYEES, VISITORS AND GUESTS ARE AUTHORIZED AND ARE RESPONSIBLE TO ISSUE A RADIOLOGICAL STOP-WORK ORDER WHENEVER SERIOUS DEVIATIONS FROM BNL RADIOLOGICAL REQUIREMENTS EXIST

- WORK DOES NOT MEET BNL RADIOLOGICAL REQUIREMENTS*
- WORK CREATES A THREAT OF RADIOLOGICAL EXPOSURES OR RELEASES*





STOP WORK PROCEDURE

- INITIATE STOP WORK BY STATING "STOP WORK" - YOU ARE IN VIOLATION OF (SPECIFY POLICY)
- ONCE STOP WORK ORDER GIVEN
 - ALL WORK RELATED TO AFFECTED ACTIVITY MUST STOP ASAP
 - PLACE WORKPLACE IN SAFE CONDITION
 - ALL WORKERS REPORT TO SUPERVISOR
 - WORK CANNOT BE RESUMED UNTIL SAFETY REVIEWS PERFORMED AND DEPARTMENT CHAIR OR DESIGNEE AUTHORIZES RESTART





ER-GET Training Credit

- Please send email to Kathy Gurski to get credit for completing this training:

gurski@bnl.gov

Subject: ER-GET training